DEQ
Montana Department
of Environmental Quality

September 11, 2015

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Meagher County Commissioners, PO Box 309, White Sulphur Springs, MT 59645
Martinsdale Colony Inc, PO Box 152, Martinsdale, MT 59053
State of Montana, State Lands, 1625 11th Ave, Helena, MT 59601-4640
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Paul Nicol, DEQ, Director's Office, 1520 E 6th Ave, Helena, MT 59620-via email

Ladies and Gentlemen:

To comply with the Administrative Rules of Montana, 17.4.607(2) and 17.4.609(2), the Department of Environmental Quality (DEQ) has prepared the enclosed Draft Environmental Assessment (EA). The attached Draft EA is for the land application of septage in Meagher County, Montana.

The purpose of this Draft EA is to inform the public of the proposed action and to seek public participation in the decision-making process. Persons wishing to comment have until the close of business on October 11, 2015, to submit written comments concerning the proposal. DEQ will not make a final decision until after the comment period has ended. A complete color copy of the Draft EA may be viewed on DEQ's website at: *http://deq.mt.gov/ea/SepicPumpers.mcpx*.

If you wish to comment on this proposed action during the comment period, please do so in writing by mailing your comments to the Waste and Underground Tank Management Bureau, Solid Waste Program, P.O. Box 200901, Helena, MT 59620-0901, or by email to mailbox *deqwutbcomments@mt.gov.*

Sincerely,

Bob McWilliams

Bob McWilliams
Environmental Science Specialist
Waste & Underground Tank Management Bureau

Enclosure: Draft EA – Martinsdale Colony Inc.

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
Solid Waste Section
PO Box 200901
Helena, MT 59620-0901

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

SECTION 1.0 – SOLID WASTE SECTION ROLES AND RESPONSIBILITIES:

The Department of Environmental Quality (DEQ), Solid Waste Section (SWS), is responsible for ensuring activities proposed under the Solid Waste Management Act, the Septage Disposal Licensure Act, the Integrated Waste Management Act, and the Motor Vehicle Disposal & Recycling Act are in compliance with current regulations. A land application site must first be approved by the county in which the site is located before the request for approval is submitted to the SWS for review and approval. Each licensee is responsible for following the Administrative Rules of Montana (ARM) for Cesspool, Septic Tank, and Privy Cleaners and other restrictions and requirements put in place by the county in which the land application site is located.

Purpose of the Environmental Assessment:

In accordance with 75-1-102, Montana Code Annotated (MCA), the Montana Environmental Policy Act (MEPA) is procedural and requires the "adequate review of state actions in order to ensure that environmental attributes are fully considered by the legislature in enacting laws to fulfill constitutional obligations; and the public is informed of the anticipated impacts in Montana of potential state actions." According to MEPA, EA's are the procedural documents that communicate the process agencies follow in their decision-making. An EA does not result in a certain decision; but rather, it serves to identify the potential effect of a state action within the confines of existing laws and rules governing such proposed activities so that agencies make balanced decisions. The MEPA process does not provide regulatory authority beyond the authority explicitly provided in the existing statute.

The Septage Disposal and Licensure regulations establish the minimum requirements for the land application of septage wastes. The EA is the mechanism that DEQ uses to: 1) Disclose whether a proposed land application site meets the minimum requirements for compliance with the current laws and rules; 2) Assist the public in understanding the licensing laws of the Septage Disposal and Licensure program; 3) Identify and discuss the potential environmental effects of the proposed land application activity if it is approved and becomes operational; 4) Discuss actions taken by the applicant and the enforceable measures and conditions of the license designed to mitigate the effects identified by DEQ during the review of the application; and 5) Seek public input to ensure DEQ has identified all the substantive environmental effects associated with the proposed land application of septage at the proposed location.

Benefits and Purpose of Project:

Septage is the liquid and solid material removed from a septic tank, cesspool, portable toilet, or similar treatment works that receives only waste and wastewater from humans or household operations. The land application of septage is an economical and environmentally sound practice. When properly managed, septage is a resource. When used as a valuable soil conditioner, septage contains nutrients that can reduce reliance on chemical fertilizers for agriculture. A properly managed land application program recognizes the benefits of septage and employs practices to maximize the value of the material. Land application of septage benefits agricultural land by the addition of moisture, organic matter, and nutrients to the soil without adversely affecting public health. When the septage is being applied as a soil conditioner; the use is considered an application rather than the disposal due to the benefits the materials provide. The land application of septage at this site will add nutrients, moisture, and improve the soil tilth for the continued production and enhancement of agricultural crops.

SECTION 2.0 – PROJECT DESCRIPTION:

Martinsdale Colony, Inc. (applicant), has submitted an application for the approval of a site for the land application of septage, on approximately 480 acres of Martinsdale Colony, Inc., property in Meagher County. At the present time, the property is being used for production of wheat and barley. Land application will occur at this site only as-needed.

Site Location:

The proposed land application site is located on private property in Section 25, Township 9 North, Range 11 East, Montana Principal Meridian, Meagher County, Montana (Figure 2.1). Figures 2.2 and 2.3 show the area proposed for land application within Section 25. Land application is proposed in the East ½ and the East ½ of the West ½ of Section 25, Township 9 North, Range 11 East. Figures 2.4 through 2.8 provide photographs of the site proposed for land application that were taken during DEQ's site visit.

Figure 2.1: Proposed Land Application Site Location

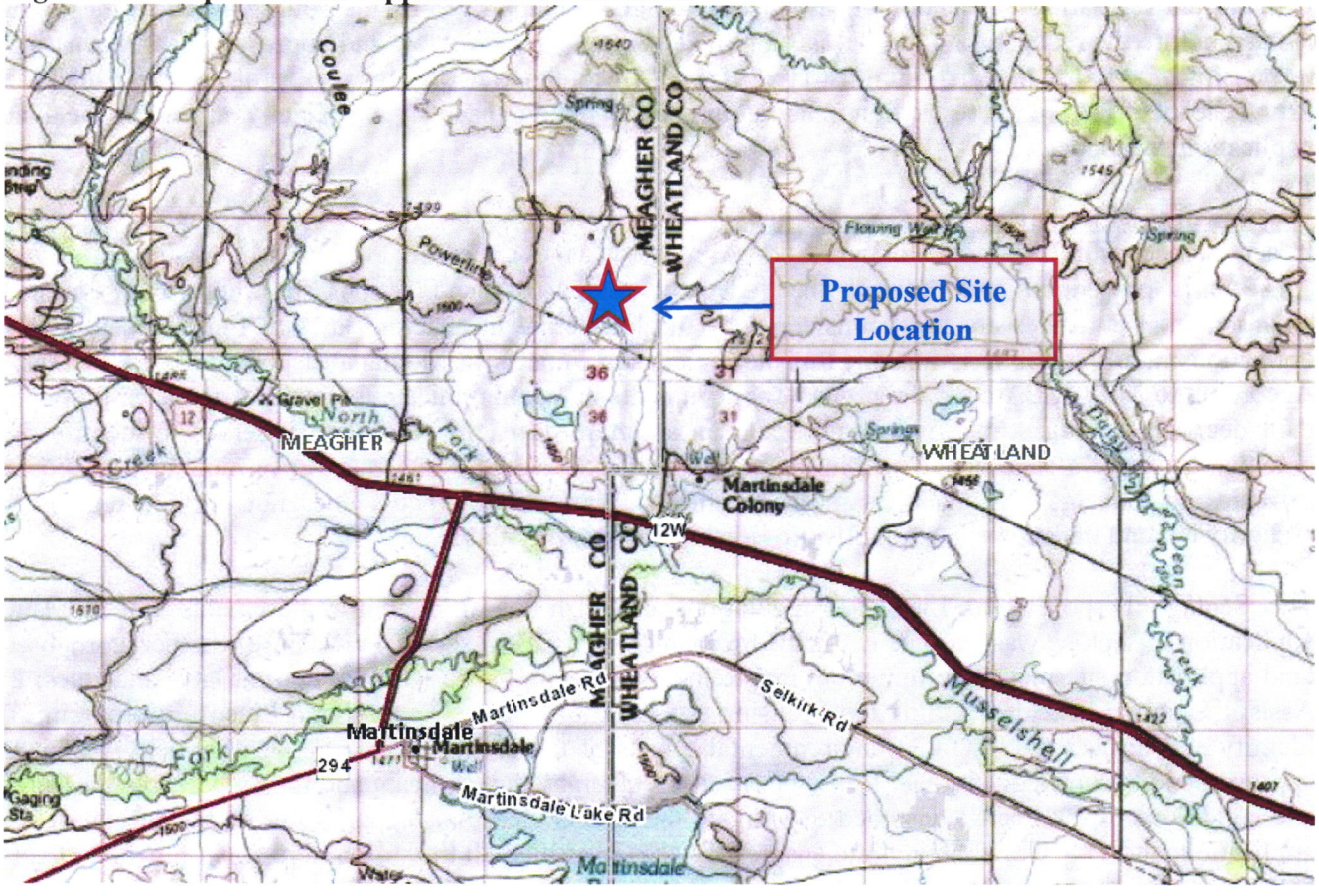


Figure 2.2: Map of Land Application Site Boundary (outlined in yellow).

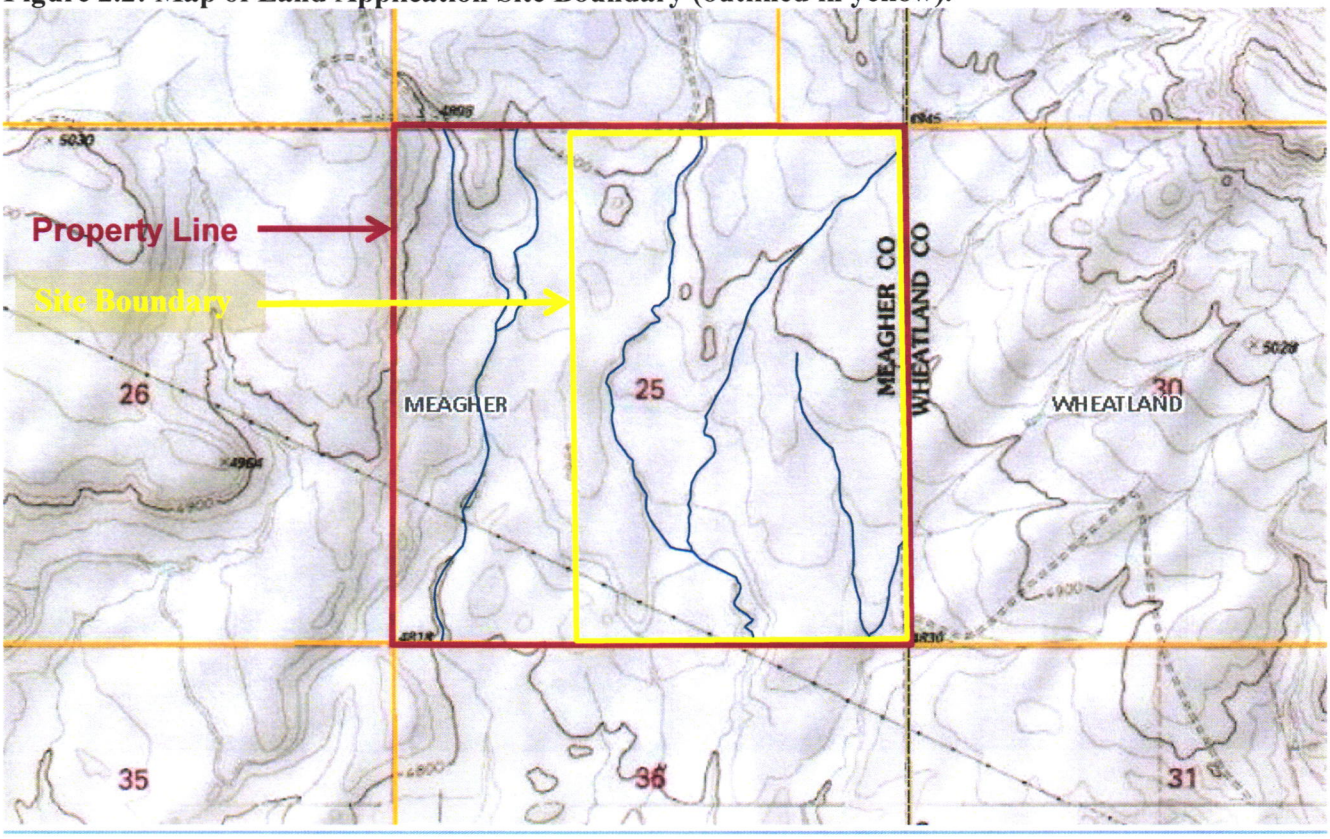


Figure 2.3: Map of Land Application Site Boundary – Section 25, T9N, R11E

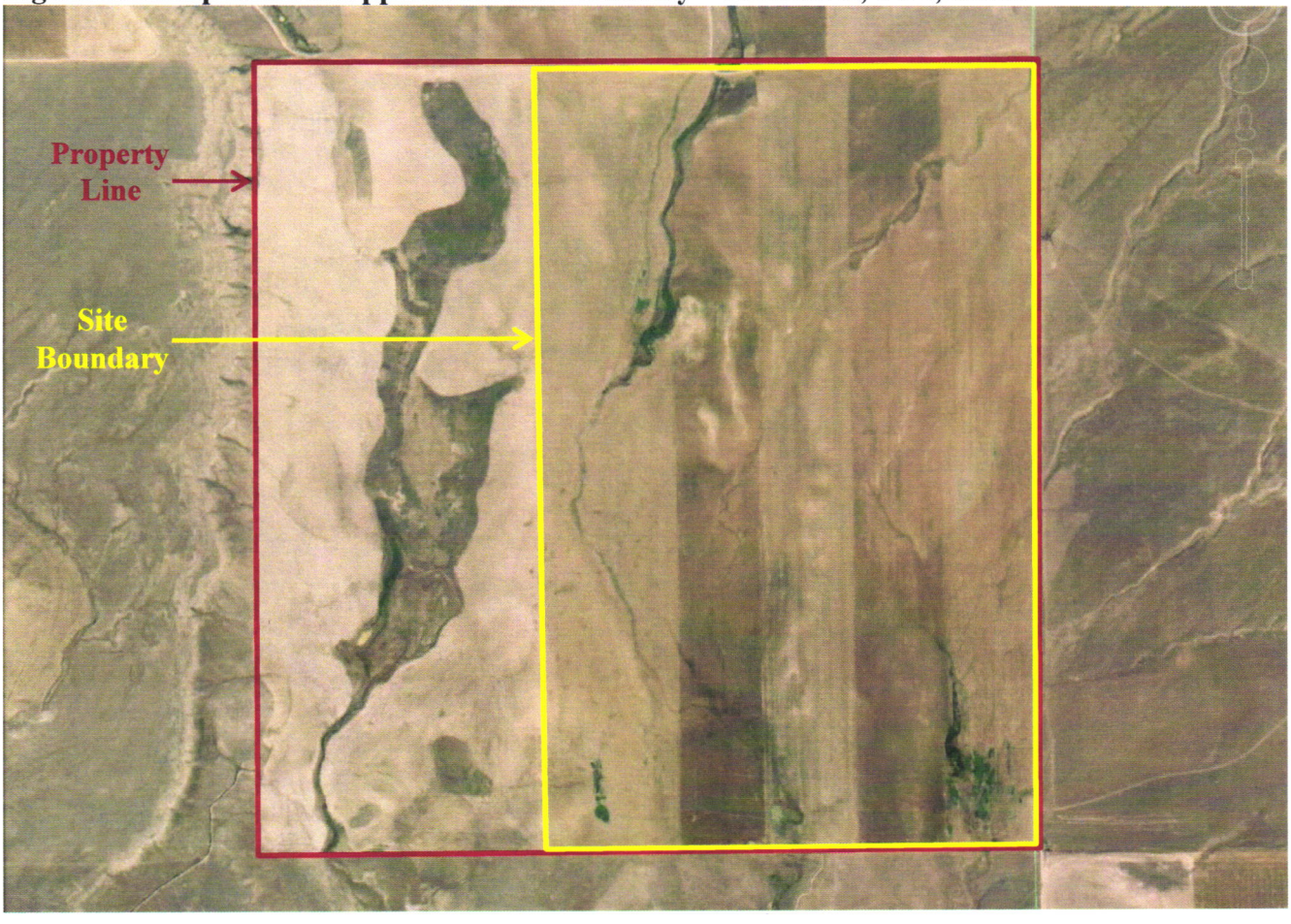


Figure 2.4: Looking North From Southeast

Figure 2.5: Looking Northwest From Southeast

Figure 2.6: Looking Southeast From Northwest

Figure 2.7: Looking South From Northwest

Figure 2.8: Looking Southwest From Northwest

Site Setback Requirements:

The applicant will maintain the setbacks noted in Table 2.1 during land application activities.

Table 2.1: Land Application Site Setback Requirements

ARM Reference	Setback Requirements
17.50.809(1)	Pumpings may not be applied to land within 500 feet of any occupied or inhabitable building.
17.50.809(2)	Pumpings may not be applied to land within 150 feet of any state surface water, including ephemeral or intermittent drainages and wetlands.
17.50.809(3)	Pumpings may not be applied to land within 100 feet of any state, federal, county, or city-maintained highway or road.
17.50.809(4)	Pumpings may not be applied to land within 100 feet of a drinking water supply source.
17.50.809(6)	Pumpings may not be applied to land with slopes greater than 6%.
17.50.809(8)	Pumpings may not be applied to land where seasonally high ground water is 6 feet or less below ground surface.

Site Operation and Maintenance Requirements:

The land application of septage is considered the beneficial use of a waste product when the material is applied in accordance with the laws and rules governing land application. The operational requirements for land application are outlined in Table 2.2.

Table 2.2: Land Application Site Operational Requirements

ARM Reference	Site Restrictions/Requirements
17.50.809(10)	All non-putrescible litter must be removed from the land application site within 6 hours of application.
17.50.809(12)	Pumpings may not be applied at a rate greater than the annual application rate (AAR) of the site for crop nitrogen requirement on an annual basis.
17.50.810(1)	Pumpings may not be applied to flooded, frozen, or snow covered ground if the Pumpings may enter state waters.
17.50.811(3)	Pumpings may be applied only if the person first performs one of the following vector attraction and pathogen reduction methods: • injection below the land surface so no significant amount remains on the land surface within one-hour of injection; • incorporation into the soil surface plow layer within 6 hours of application; • addition of alkali material so that the pH is raised to and remains at 12 or higher for a period of at least 30 minutes; or, • management as required by 17.50.810 when the ground is frozen

The acreage available for land application will be rotated on an annual basis, so that parcels used for land application one year will be inactive the next year. This rotation allows the vegetation or crop of choice to utilize the nitrogen and other nutrients added from the land application process.

Septage will be land applied using a splash plate to disperse the waste in a wide, thin, even layer at a beneficial rate. Septage will be incorporated into the soil surface plow layer with a tractor and tillage equipment within six-hours of application.

Land application will occur as-needed at a rate not exceeding the Annual Application Rate (AAR) in gallons per acre. For septage and portable toilet waste, the AAR is calculated based upon the production of a specific crop or grass, as follows:

AAR = Crop Nitrogen Requirement/0.0026 for septage waste.

In this case, the landowner currently uses the property for the production of wheat or barley. The wheat at this location has a nitrogen requirement of 99 pounds/acre. The resulting AAR for septage is 38,076 gallons per acre, and is equal to approximately 1.35 inches of liquid applied per acre per year. For comparison, the average annual precipitation received during the month of August is approximately equal to the volume of septage that would be land applied per acre per year at the proposed site for wheat. The barley at this location has a nitrogen requirement of 64 pounds/acre. The resulting AAR for septage is 24,615 gallons per acre, and is equal to approximately 0.87 inches of liquid applied per acre per year. For comparison, the average annual precipitation received during the month of October is approximately equal to the volume of septage that would be land applied per acre per year at the proposed site for barley.(see Table 2.3).

Site Climate:

The climate in the area proposed for land application is typical of the semi-arid regime in the Martinsdale area. Table 2.3 provides a summary of monthly climate information. The winters in the Martinsdale area are long and moderately snowy; the summers are hot and dry. The average annual precipitation is approximately 13.09 inches. The majority of precipitation falls during the months of May and June, while February is the driest month.

Table 2.3: Monthly Climate Summary

MARTINSDALE 3 NNW, MONTANA (245387)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	34.2	39.1	44.3	55.1	64.3	71.7	80.4	80.2	70.2	59.7	44.1	35.9	56.6
Average Min. Temperature (F)	12.5	15.8	19.2	26.8	34.8	42.1	46.2	44.2	36.9	30.2	21.3	15.0	28.7
Average Total Precipitation (in.)	0.50	0.36	0.64	1.12	2.34	2.36	1.60	1.37	1.10	0.72	0.50	0.47	13.09
Average Total SnowFall (in.)	10.8	7.6	11.3	6.5	1.8	0.2	0.0	0.0	0.8	3.8	6.4	9.2	58.6
Average Snow Depth (in.)	2	1	1	0	0	0	0	0	0	0	1	1	1

Percent of possible observations for period of record.
Max. Temp.: 95% Min. Temp.: 95.2% Precipitation: 97.7% Snowfall: 98.1% Snow Depth: 95.5%

Source: Western Regional Climate Center

SECTION 3.0 – ALTERNATIVES CONSIDERED:

The following provides a description of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:

A decision by DEQ is triggered when the applicant upholds the request for approval of the proposed activity at the proposed location. The applicants, however, may at any time choose to withdraw the application. This would result in DEQ selecting the "no-action" alternative, because a DEQ decision would not be necessary. If the applicant withdraws the application, the applicant could seek to locate a land application site elsewhere.

Alternative A: The "no action" alternative. This alternative will be implemented when a final decision by DEQ is not required because the applicant has withdrawn the application for approval of the land application site.

Alternative B: The 'license application denied' alternative. This alternative will be implemented if the application does not meet the minimum requirements of the Septage Disposal Licensure Act and could not continue to be processed as submitted. If denied, the applicant may modify the application for the current site and reapply for licensure, or could locate, investigate, and apply for a licensure of another site.

Alternative C: The 'license application approved' alternative. This alternative will be implemented when DEQ approves the application for licensure of the new disposal site if the application meets the requirements of the Septage Disposal Licensure Act.

In consideration of these alternatives, DEQ has not received a request by the applicant to withdraw the application for licensure. DEQ has determined the application meets the requirements of the Septage Disposal and Licensure Laws. Therefore, the potential environmental effects of Alternative C were evaluated for the proposed project based on the information provided in the application, DEQ's research on the site and area surrounding the proposed site, and DEQ's site visit. The results of DEQ's evaluation of potential environmental effects related to the proposed land application site are summarized in Section 4.0.

SECTION 4.0 - EVALUATION OF POTENTIAL EFFECTS

Tables 4.1 and 4.3 of this section identify and evaluate the potential environmental effects that may occur to human health and the environment if the land application site is approved. The discussion of the potential impacts only includes those resources potentially affected. If there is no effect on a resource, it may not be mentioned in the analysis.

Direct and indirect impacts are those effects that occur in or near the proposed project area and might extend over time. Often, the distinction between direct and indirect effects is difficult to define, thus in the following discussion, impact or effect means both types of effects.

TABLE 4.1: POTENTIAL IMPACTS OF THE PROPOSED LAND APPLICATION SITE ON THE PHYSICAL ENVIRONMENT

PHYSICAL ENVIRONMENT	Major	Moderate	Minor	None	Unknown	Attached
1.0 TERRESTRIAL, AND AQUATIC LIFE AND HABITATS				✔		✔
2.0 WATER QUALITY, QUANTITY & DISTRIBUTION				✔		✔
3.0 GEOLOGY				✔		
4.0 SOIL QUALITY, STABILITY, AND MOISTURE			✔			✔
5.0 VEGETATION COVER, QUANTITY & QUALITY			✔			✔
6.0 AESTHETICS				✔		✔
7.0 AIR QUALITY				✔		
8.0 UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES			✔			✔
9.0 HISTORICAL AND ARCHAEOLOGICAL SITES				✔		✔
10.0DEMANDS ON ENVIRONMENTAL RESOURCES ON LAND, WATER, OR ENERGY				✔		

ANALYSIS OF TABLE 4.1: POTENTIAL IMPACTS TO THE PHYSICAL ENVIRONMENT

This section evaluates the potential environmental effects that may occur on the physical environment if the proposed land application site is approved. The number on each of the underlined resource headings corresponds to a resource listed in the tables. Generally, only those resources potentially affected by the proposal are discussed. Therefore, if there is no effect on a resource, it may not be discussed.

1.0 Terrestrial, Avian, and Aquatic Life and Habitats

There is a Palustrine Emergent System of wetlands mapped on four acres of Martinsdale Colony, Inc., in the vicinity of the areas proposed for land application. Wetlands in this system are characterized by the erect, rooted herbaceous vegetation that is present during most of the growing season. Land application will not occur within the 150-feet of this wetland system. There are no other continuously active aquatic or wetland systems that exist within the boundary of the proposed site, it is unlikely that there is any significant aquatic life or habitat anywhere on the site. Therefore, there is no anticipated impact to aquatic species.

An intensive survey was not performed to verify the presence of or impact to terrestrial or avian species within the land application site. However, the site is actively farmed for the production of wheat and barley, so it is unlikely that any terrestrial or avian species reside permanently on the site. Therefore, no additional impacts to terrestrial or avian species are anticipated from the proposed land application activities.

2.0 Water Quality, Quantity, and Distribution

Surface Water

The proposed land application site is located in west-central Montana and lies in the western end of the the Upper Musselshell Basin. The main drainages mapped on the United States Geological Survey (USGS) Mud Creek MT 1:24,000 quadrangle in the project vicinity include Dean Creek to the north and east of the site and Mud Creek to the west of the site. There are several intermittent drainages on the property. At the north end of the site, in the center drainage a Palustrine Emergent System of wetlands is mapped. Surface water drainage from the proposed land application area is generally to the south, toward the North Fork of the Musselshell River.

The area proposed for land application is located approximately 1¼ miles north of the North Fork of the Musselshell River. Septage will not be applied to land within 150 feet the high water mark of any state surface water, including intermittent drainages, irrigation canals, and wetlands. As a result, no impacts to surface water are anticipated from the proposed land application activities.

Figure 4.1: Surface water features

Groundwater

The shallow groundwater in much of this area is impacted by the sodium rich sediments from the erosion of the shonkinite. The water is naturally high in sodium and is brackish in most areas. A large northwest trending fault is located about 3 miles north of the proposed site. An abandoned oil test well, completed north of the fault, is a flowing artesian well that is at least 1100 feet deep and is reported to be a fresh water well. The well is completed in the Big Elk member of the Colorado shale.

The Big Elk member is 1100 feet below the top of the Colorado formation. The bottom of the Colorado is at about the 2500 foot elevation beneath the proposed site and the Colorado has a thickness of up to 2200 feet. Erosion has exposed the Cretaceous age Claggett Shale and Eagle formations in the surrounding area. The massive Colorado shale, with thicknesses up to 2200 feet underlies the Eagle formation and is also exposed in the area. Most exposures are found higher up the mountain sides. Several wells have been reportedly drilled on the flood plain, all of these wells produced brackish water (Montana Department of Environmental Quality, Source Water Protection Program, Source Water Delineation and Assessment Report for the Martinsdale Colony June 2004.)

Nearby Groundwater Supply Wells

The Montana Bureau of Mines and Geology's Groundwater Information Center (GWIC) database identifies two water wells within 1½ miles of the site. Because the GWIC database locates wells by section, all wells in the sections that contain the proposed land application site and those surrounding the sites were included in this analysis.

Table 4.2 summarizes the information for the wells that were identified within the vicinity of the proposed land application site. Because the data in GWIC is based on well drillers' records, the details are not field-verified for accuracy. Further, the GWIC database contains well information only for those drilling records that have been submitted; there may be additional wells in the area that are not contained in the database because the records have not been submitted to GWIC. Therefore, this analysis is based only on information contained in the GWIC database.

According to GWIC, there are no documented wells in Section 25. There are two GWIC-documented domestic wells in Section 31, located south and east of Section 25. One of the wells in Section 31 was drilled in 1966 and is reported to be 98 feet deep, with a static water level of 50 feet below ground surface at the time of installation. The other well in Section 31 is 310 feet deep and at the time of installation had a water level of 95 feet below ground surface. There is one GWIC-recorded well in Section 35, located to the south and west of Section 25; this well is reported to be 340 feet deep with a static water level of 10 feet below ground surface at the time of installation.

Septage will be land applied in a wide, thin, even layer at rate not exceeding the AAR, and will be incorporated into the soil surface plow layer within six-hours of application. Static water levels are greater than 6-feet below ground surface (ARM 17.50.809(8)). There is no anticipated impact to the groundwater or groundwater supply wells as a result of the proposed land application activities.

Table 4.2: Summary of Nearby Wells

Township	Range	Section	Total Depth	Static Water Level	Yield (gallons per minute)	Date	Use
9 North	11 East	31	310	95	15	11/23/74	Domestic
9 North	11 East	31	98	50	11	7/15/66	Domestic
9 North	11 East	35	340	10	30	2/28/09	Domestic

(Source: Montana Bureau of Mines and Geology, Ground Water Information Center)
The total depth column is the depth drilled, which may be deeper than the bottom of the well as completed. Static water level is the level of water measured in the well at the time of installation. Yield is the amount of water the well is expected to be capable of producing as reported by the well driller. All data is based upon driller's logs and may not be reported for every well.

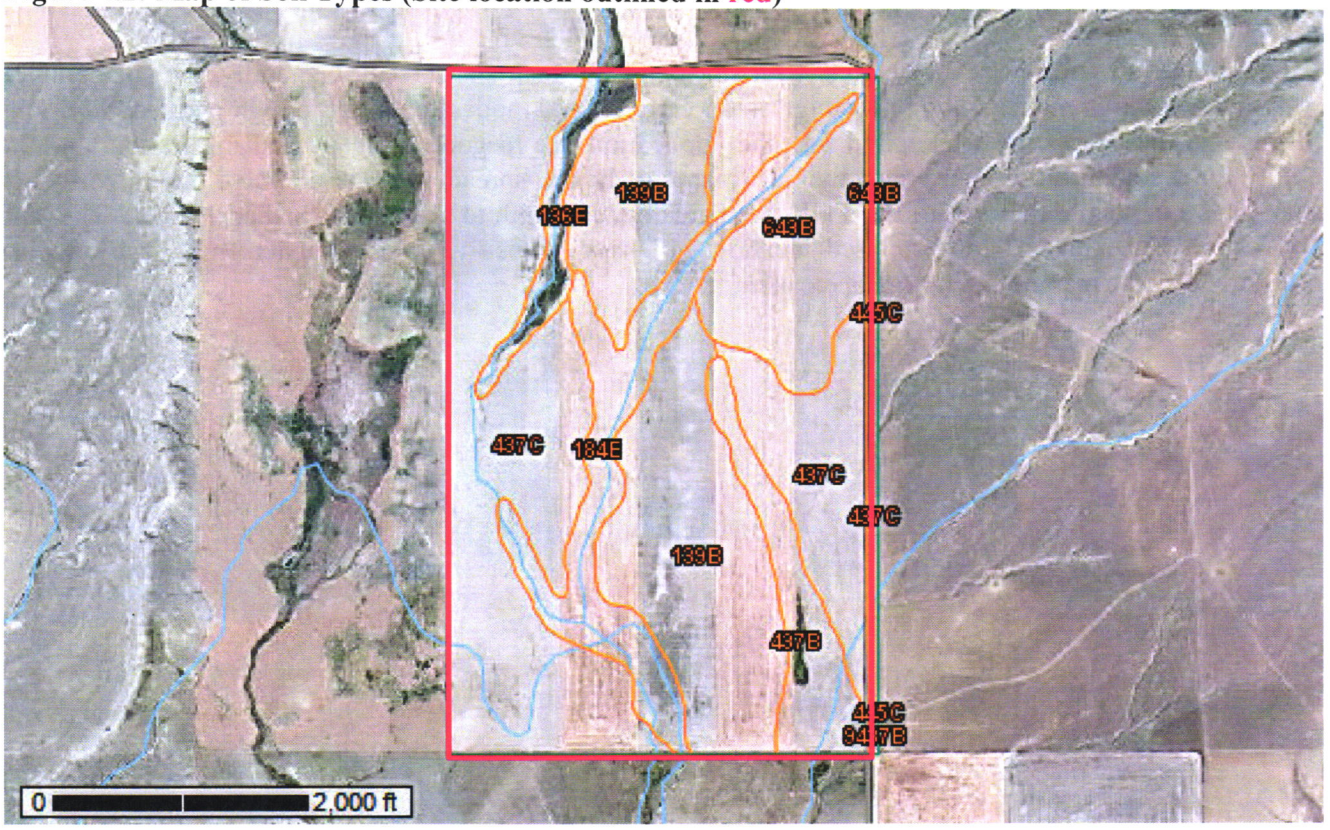
4.0 Soil Quality – Stability & Moisture

The Delpoint-Cabbart complex, 2 to 8 percent slopes, is the major soil type identified at the proposed land application site (Figure 4.2). This soil complex encompasses approximately 152 acres of the proposed site and typically consists of 7 to 24 inches of loam overlying 27 to 60 inches of bedrock. All of the soils in the proposed land application site are comprised of alluvial material derived from sandstone and siltstone over residuum that was weathered from sandstone and siltstone sedimentary rock. These soils are well-drained with a very low to moderately low water capacity. The secondary major soil type at the proposed land application site comprises approximately 106 acres and is classified as the Amesha-Musselshell complex, on 2 to 4 percent slopes. The typical profile of the Amesha-Musselshell complex consists of 0 to 4 inches of gravely loam, 4 to 49 inches of loam, and 49 to 60 inches of gravelly loam. The third major soil type, comprising approximately 55 acres at the proposed land application site, is classified as the Shambo loam, on 2 to 4 percent slopes. The typical profile of the Shambo loam consists of 0 to 46 inches of loam and 46 to 60 inches paragravelly gravelly sandy loam. The last three minor soil types are the Crago-Musselshell

complex (45 acres), on 8 to 35 percent slopes, the Musselshell-Crago complex (24 acres) on, 2 to 4 percent slopes and Delpoint-Cabbart complex (14 acres), on 8 to 35 percent slopes.

Land application will not occur on soils with slopes greater than six percent. Generally, the site soils are well drained with a moderately high to high water capacity and moderately high to high permeability. This means that these soils are well suited for land application due to good drainage and infiltration, and the ability for the addition of approximately 1.35"inches of liquid, spread out over a twelve month period, to soak in at a moderate rate. All of the soils in the area have a depth to water greater than 10 feet. The land application of septage at the proposed location will have a positive minor impact on soils by adding moisture, organic matter, and nutrients for plant uptake.

Figure 4.2: Map of Soil Types (Site location outlined in red)



Soils key

Map Unit Symbol	Map Unit Name	Acres in land application site	Percent of land application site
136E	Delpoint-Cabbart complex. 8 to 35 percent slopes	13.8	3.4%
139B	Amesha-Musselshell complex, 2 to 4 percent slopes	106.2	26.1%
184E	Crago-Musselshell complex, 8 to 35 percent slopes	45.0	11.0%
437B	Musselshell-Crago complex, 2 to 4 percent slopes	24.5	6.0%
437C	Delpoint-Cabbart complex, 2 to 8 percent slopes	152.6	37.4%
643B	Shambo loam, 2 to 4 percent slopes	55.4	13.6%
Subtotals for the Soil Survey Area		397.5	97.5%

5.0 Vegetation Cover, Quantity and Quality

The quantity and quality of the vegetative cover will be enhanced by the proposed land application activities. When properly managed, septage is a resource that is used as a valuable soil conditioner that contains nutrients. This can reduce reliance on chemical fertilizers for agriculture. A good land application program recognizes the potential benefits of septage and employs practices to maximize these benefits. The acreage available for land application will be rotated on an annual basis, so that parcels used one year will be inactive the next year. This rotation allows the vegetation or crop of choice to utilize the nitrogen and other nutrients added from the land application process. When applied as a soil conditioner, septage provides benefits to agricultural land by the addition of moisture, organic matter and nutrients to the soil without adversely affecting public health. The land application of septage at this site will have a positive minor impact on the site from the addition of nutrients and moisture. The organic matter added from the proposed activity will also improve the soil tilth for the continued production and enhancement of agricultural crops.

6.0 Aesthetics

This proposed land application site is on active farming land and is not located on a prominent topographical feature. It is not visible from a highly populated area. The application of septage is similar to the day to day activities of farming and ranching in the area and will not cause a change in the aesthetics of the area. There is no additional impact to the aesthetics anticipated as a result of the proposed land application activities.

8.0 Unique, Endangered, Fragile, Or Limited Environmental Resources

A search of the Montana Natural Heritage Program indicated the Golden Eagle, Ferruginous Hawk, Greater Sage-Grouse, Northern Redbelly Dace, and the Northern Redbelly X Finescale Dace are listed as species of concern. Designation as a species of concern is not a statutory or regulatory classification. Instead, these designations provide a basis for resource managers and decision-makers to make proactive decisions regarding species conservation. There are no permanent surface water bodies located on the proposed site. An intensive site survey was not conducted to verify the presence of, or impact to, sensitive, unique, endangered, or fragile species within or adjacent to the proposed land application site because the site is currently used for farming and the active production of wheat and barley. Therefore, it is unlikely that these species have made a permanent residence on the areas proposed for land application. As a result of the limited development and lack of human population in the area, there remains adequate acreage of similar habitat available in the vicinity of the proposed site to accommodate any species that would have been forced to relocate from the current agricultural activities. Therefore, there is no additional impact to resources anticipated as a result of the proposed land application activities.

9.0 Historical and Archaeological Site

A cultural resource file search was conducted for the proposed land application site. Records from the State Historic Preservation Office indicate there have been no previously recorded historical or archaeological sites recorded within Section 25, T9N, R11E. The State Historic Preservation Office stated that because there is a low likelihood that cultural sites will be impacted, a cultural resource inventory is unwarranted at this time. The site is actively used for the production of wheat and barley. However, should cultural materials be inadvertently discovered during land application activities at the proposed site, the State Historic Preservation Office will be notified immediately.

TABLE 4.3: POTENTIAL IMPACTS OF THE PROPOSED LAND APPLICATION SITE ON THE HUMAN ENVIRONMENT

HUMAN ENVIRONMENT	Major	Moderate	Minor	None	Unknown	Attached
1.0 SOCIAL STRUCTURES & MORES:				✔		
2.0 CULTURAL UNIQUENESS & DIVERSITY:				✔		
3.0 DENSITY & DISTRIBUTION OR POPULATION & HOUSING:				✔		
4.0 HUMAN HEALTH & SAFETY:				✔		✔
5.0 COMMUNITY & PERSONAL INCOME:				✔		
6.0 QUANTITY & DISTRIBUTION OF EMPLOYMENT:				✔		
7.0 LOCAL & STATE TAX BASE REVENUES:				✔		
8.0 DEMAND FOR GOVERNMENT SERVICES:			✔			✔
9.0 INDUSTRIAL, COMMERCIAL, & AGRICULTURAL ACTIVITIES & PRODUCTION:				✔		
10.0 ACCESS TO & QUALITY OF RECREATIONAL & WILDERNESS ACTIVITIES:				✔		
11.0LOCALLY ADOPTED ENVIRONMENTAL PLANS & GOALS:				✔		
12.0TRANSPORTATION:				✔		✔

ANALYSIS OF TABLE 4.3 - POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

This section evaluates the potential environmental effects that may occur on the human environment if the proposed facility is approved. The number on each of the underlined resource headings corresponds to a resource listed in the tables. Generally, only those resources potentially affected by the proposal are discussed. Therefore, if there is no effect on a resource, it may not be discussed.

4.0 Human Health & Safety

The septage will be land applied at the site on an as-needed basis using a dispersive mechanism. The dispersive mechanism applies the waste in a wide, thin, even layer at a beneficial rate. Septage will be incorporated into the soil surface plow layer with a tractor and tillage equipment within six-hours of application. There are no additional health or safety concerns when the site is operated in accordance with the Septage Disposal regulations. Therefore, there are no additional impacts on human health and safety anticipated as a result of land application activities.

8.0 Demand for Government Services

DEQ Solid Waste Section will conduct periodic inspections of land application activities at the site. The site may also be inspected by the Meagher County Sanitarian. Therefore, a minor impact on the demand for government services is anticipated.

12.0 Transportation

The proposed land application site will be accessed off Highway 12 West. Highway 12 West currently supports traffic to rural homes, farms, and ranches, including heavy equipment associated with the current agricultural activities in the area. The site will be used by the applicant on an as needed basis and will not cause a significant increase in traffic on Highway 12 West. There are no additional impacts to transportation anticipated as a result of the proposed land application activities.

SECTION 5.0 CONCLUSIONS AND RECOMMENDATIONS

Evaluation of mitigation, stipulations, and other controls enforceable by the agency or another government agency:
The proposed land application site and Operation and Maintenance (O&M) Plan will meet the requirements of the Montana Septage Disposal and Licensure Law, Air and Water Quality Acts, and other applicable Montana environmental laws and regulations, as well as county ordinances. Adherence to the regulations and the approved O&M Plan will mitigate the potential for harmful releases and impacts to human health and the environment by the proposed activity at the site.

Recommendation:
DEQ's recommendation is to distribute the Draft EA to adjacent landowners and interested persons for 30 days to satisfy the public notification and participation requirements of MEPA. Comments received during the 30-day public participation period in response to the Draft EA will be considered in the final decision on the proposed action.

Findings:
DEQ has determined that the proposed site, located on rural, private property, will have a minor impact on the surroundings. Access to the site will be controlled and all land application activities will be performed according to the DEQ-approved O&M Plan to ensure that the land application activities will be conducted in compliance with all applicable rules and regulations. Site activities will be verified by periodic inspections performed by DEQ and/or Meagher County personnel to ensure that the potential risk of adverse effects on human health and the environment resulting from land application activities at the site are minimized. This treatment option is a beneficial reuse of a waste product.

Other groups or agencies contacted or which may have over-lapping jurisdiction:
Meagher County Public Health Department

Individuals or groups contributing to this EA:
Martinsdale Colony, Inc.
Montana Natural Heritage Program
Montana Historical Society State Historic Preservation Office
Natural Resource Information System

References:
Western Regional Climate Center, 2215 Raggio Parkway, Reno NV 89512-1095
Montana Tech of the University of Montana, 2012, Montana Bureau of Mines and Geology,
Montana Department of Environmental Quality, Source Water Protection Program, Source Water Delineation and Assessment Report for the Martinsdale Colony June 2004.
Groundwater Information Center, http://mbmggwic.mtech.edu/
United States Department of Agriculture, 2012, Natural Resources Conservation Service, Web Soil Survey, http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
United States Geological Survey, 1964, Mud Creek MT 1:24000 Topographic Map

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Date: September 11, 2015